CLAIMS

1. A method for collecting an object material from a solution, which comprises the following steps:

a step of adding a second solvent to a solution composed of an object material to be collected and a first solvent, then mixing therewith to form an emulsion containing the object material in the second solvent in a state of which the emulsion is not uniformly dissolved in the second solvent; and

a step of separating thus obtained emulsion from the solution.

2. The method according to claim 1, wherein the first solvent is an organic solvent and the second solvent is water.

3. The method according to claim 2, wherein the object material is an organic hydroperoxide.

4. The method according to claim 1, wherein the emulsion is formed using ultrasonic or mechanical agitation.

5. The method according to claim 1, further comprises a step of collecting the object material from the emulsion obtained in the separating step after the separating step.

6. The method according to claim 5, wherein the step of collecting the object material from the emulsion comprises centrifugal separation.

7. The method according to claim 5, wherein the step of collecting the object material from the emulsion comprises extracting the object material from the emulsion using an extractant.

8. The method according to claim 7, wherein the extractant is a one having a boiling point lower than that of any of the object material and the second solvent.

9. The method according to claim 8, further comprises a step of separating the object material by subjecting an extracted mixture obtained by extracting the object material from the emulsion using an extractant to distillation.

10. The method according to any one of claims 1 to 8, wherein the collecting method is at least a part of an concentration step in a process for producing propylene oxide comprising an oxidation step of obtaining an organic hydroperoxide by oxidation of an organic compound, a concentration step of concentrating the organic hydroperoxide and an epoxidation step of obtaining propylene oxide by reacting the organic hydroperoxide with propylene.

11. A process for producing propylene oxide, which comprises an oxidation step of obtaining an organic hydroperoxide by oxidation of an organic compound, a concentration step of concentrating the organic hydroperoxide and an epoxidation step of obtaining propylene oxide by reacting the organic hydroperoxide with propylene, wherein at least a part of the concentration step is any one of claims 1 to 8.